What is claimed is:

1. A spectroscopy system for characterizing surface phenomenon comprising:

at least one light source operable to generate a source beam,

an optical element having an optical surface,

a support block formed with at least one sample well having a center, the source beam being aimed at the sample well, the support block being disposed on the optical surface thereby defining a substantially vertical rear cell surface having a center,

a syringe filled with a membrane solution in fluid communication with a needle having a distal end disposed in front of the sample well, the distal end being aimed at a point above the center of the rear cell surface, the syringe be operable to eject a steady stream of membrane solution from the needle onto the circular rear cell surface thereby forming a membrane defining at least a portion of a layer under test, the membrane having a substantially uniform thickness that covers substantially the entire rear cell surface, and

a detector operable to detect light that is at least one of reflected and scattered by the layer under test.

2. The system of claim 1 comprising:

at least one actuator coupled to the syringe and a processor coupled to the actuator wherein the processor is operable to initiate the formation of the membrane.

3. The system of claim 1 wherein the optical element is at least one of a prism, mirror, lens and optical fiber.

4. The system of claim 3 wherein optical surface is at least partially coated with a metallic coating.

5. The system of claim 4 wherein the metallic coating is at least partially coated a dielectric layer.

6. The system of claim 1 comprising:

a plurality of syringes each having at least one associated actuator and a processor coupled to the actuators wherein the processor is operable to initiate the delivery of fluids to the sample well.

7. A method of forming a membrane in a spectroscopy system comprising:

providing an optical element having an optical surface,

providing a support block formed with at least one sample well having a center, the support block being disposed on the optical surface thereby defining a substantially vertical rear cell surface having a center,

providing a syringe filled with a membrane solution in fluid communication with a needle having a distal end disposed in front of the sample well,

aiming the distal end being at a point above the center of the rear cell surface,

ejecting a steady stream of membrane solution from the needle onto the circular rear cell surface thereby forming a membrane defining at least a portion of a layer under test, the membrane having a substantially uniform thickness that covers substantially the entire rear cell surface.

8. The method of claim 7 comprising:

providing at least one actuator coupled to the syringe and a processor coupled to the actuator wherein the processor is operable to initiate the formation of the membrane.

9. The method of claim 7 wherein the optical element is at least one of a prism, mirror, lens and optical fiber.

10. The method of claim 9 wherein optical surface is at least partially coated with a metallic coating.

11. The method of claim 9 wherein the metallic coating is at least partially coated a dielectric layer.

12. The method of claim 7 comprising:

providing a plurality of syringes each having at least one associated actuator and a processor coupled to the actuators wherein the processor is operable to initiate the delivery of fluids to the sample well.